



# Animal House: The Dark Tetrad traits and membership in sororities and fraternities

Cameron S. Kay\*

Department of Psychology, University of Oregon, United States of America

## ARTICLE INFO

### Keywords:

Machiavellianism  
 Grandiose narcissism  
 Psychopathy  
 Everyday sadism  
 Sorority  
 Fraternity

## ABSTRACT

Very little is known about the relationship between antagonistic personality traits and membership in Greek-letter organizations (GLOs). The present study ( $N = 2191$ ) examined the association between the Dark Tetrad traits—Machiavellianism, grandiose narcissism, psychopathy, and everyday sadism—and membership in sororities and fraternities. Participants who were high in grandiose narcissism were more likely to be in sororities and fraternities, whereas participants who were high in Machiavellianism and everyday sadism were less likely to be in these organizations. Psychopathy was not significantly associated with membership in GLOs. Taken together, the present results suggest that members of GLOs are not necessarily more manipulative, cold-hearted, or cruel than their non-GLO counterparts, but they may be more entitled, domineering, and status-seeking.

## 1. Introduction

Greek-letter organizations (GLOs)—commonly referred to as sororities<sup>1</sup> and fraternities—are selective (and often secretive) social organizations that are primarily found on college campuses in Canada, the Philippines, and the US. Although these organizations regularly tout the benefits they provide to their members (e.g., through networking and social events) and to the broader community (e.g., through volunteering and fundraising), they are perhaps best known for their reputation of enabling (if not encouraging) excessive partying; alcohol and drug use; and sexual promiscuity (Tollini & Wilson, 2010; Wilson & Tollini, 2013).

Although some prior research has been devoted to uncovering the personality correlates of membership in these organizations (e.g., Armstrong & Grieve, 2015), the more antagonistic aspects of personality have been left largely unexamined. For example, no research has examined the association of the Dark Tetrad traits—a personality constellation consisting of manipulative and cynical Machiavellianism, entitled and exhibitionistic narcissism, impulsive and reckless psychopathy, and cruel and abusive sadism (Chabrol et al., 2009)—with membership in GLOs. This is unfortunate, as individuals with these traits can present a number of issues for the organizations that choose to retain them. As but one example, individuals high in the Dark Tetrad traits are more likely to threaten (Jonason, Luevano, & Adams, 2012; Jonason, Slomski, & Partyka, 2012), bully (Dåderman & Ragnestål-Impola,

2019), and sabotage (Baka, 2019) other members of their organizations (see also O'Boyle et al., 2012). The present study aims to further our understanding of the personality correlates of membership in GLOs by examining the association between the Dark Tetrad traits and membership in sororities and fraternities.

There are at least four reasons to suspect the Dark Tetrad traits would be associated with membership in these organizations. First, the Dark Triad (i.e., the Dark Tetrad without everyday sadism; Paulhus & Williams, 2002) is associated with sensation seeking (Crysel et al., 2013; Glenn & Sellbom, 2015). Individuals high in these traits are, for example, more likely to engage in disordered gambling (Onyedire et al., 2019; Trombly & Zeigler-Hill, 2017); abuse alcohol and other illicit drugs (Chabrol et al., 2017; Dinić et al., 2019; Stenason & Vernon, 2016); play violent video games (Greitemeyer & Sagioglou, 2017; Williams et al., 2001); and drive in unsafe and aggressive ways (Ball et al., 2018; Endriulaitienė et al., 2018). It is plausible that individuals with antagonistic personality traits would be drawn to GLOs because they are attracted to the promise (imagined or not) of a “good time”.

In a similar vein, individuals high in the Dark Tetrad may be drawn to GLOs because they see these organizations as a way to satisfy their desire for short-term sexual relationships. Numerous studies have indicated that individuals high in the Dark Tetrad have what is known as an *unrestricted sociosexual orientation*: they tend to feel a greater desire for sex (Baughman et al., 2014); are less discerning when it comes to

\* Department of Psychology, 1227 University of Oregon, Eugene, OR 97403, United States of America.

E-mail address: [ckay@uoregon.edu](mailto:ckay@uoregon.edu).

<sup>1</sup> For simplicity, we refer to all GLOs composed primarily of women as “sororities” rather than distinguishing between “sororities” and “women's fraternities.”

choosing their sexual partners (Kay, 2021); and gravitate towards relationships that require little commitment (Jonason, Luevano, & Adams, 2012; Jonason, Slomski, & Partyka, 2012). As such, the reputation of sorority members as “promiscuous” (Wilson & Tollini, 2013) and fraternity members as “womanizers” (Tollini & Wilson, 2010) may attract individuals high in the Dark Tetrad because they see these organizations as a way to meet new sexual partners.

A third reason to suspect that the Dark Tetrad traits may be elevated among members of GLOs is that individuals high in these traits may see membership in these organizations as a way to boost their status, either while on campus (e.g., by being invited into a selective organization) or after graduating (e.g., by using their expanded social networks to secure higher-paying jobs). Although a desire for power seems to be a characteristic that is shared among the Dark Triad traits (Jonason & Zeigler-Hill, 2018; Lee et al., 2013), it is perhaps most relevant to narcissism. Specifically, a key part of many conceptualizations of grandiose narcissism is a need to reinforce one's grandiose sense of self (Back et al., 2013; Jones & Paulhus, 2011). It is, therefore, plausible that narcissistic individuals would be drawn to sororities and fraternities because they see these organizations as providing the opportunity to achieve greater status, thereby reaffirming their elevated sense of self-importance. This hasn't been formally studied, but a positive association between narcissism and membership in GLOs would align with previous research on the relationship between the Five-Factor Model traits (e.g., extraversion, agreeableness, conscientiousness; Costa & McCrae, 1992) and membership in sororities and fraternities. Specifically, sorority and fraternity members tend to be more extraverted (e.g., gregarious, assertive, and daring) than their non-GLO counterparts (Armstrong & Grieve, 2015; Cole et al., 2003a, 2003b; Park et al., 2009). Since grandiose narcissism is defined, in part, by the presence of agentic extraversion (Miller et al., 2016), we might expect that narcissism would also be associated with membership in GLOs.

Finally, there is some evidence to suggest that sadism, in particular, would be elevated among members of GLOs. Sadism is characterized by the enjoyment of everyday acts of cruelty (Buckels et al., 2013). For example, sadistic individuals derive more pleasure from believing they have killed wood bugs and are more willing to expend effort on letter-counting tasks to inflict blasts of white noise on innocent others. It is, therefore, possible that sadistic individuals would be attracted to the prospect of engaging in the degrading and often dangerous initiation rituals found in some sororities and fraternities (e.g., depriving prospective members of sleep; forcing prospective members to hold stress positions). Previous research has, in fact, shown that sadism is associated with a desire to haze members of one's group (Arteta-Garcia, 2015).

Taken together, there appears to be a fair amount of evidence to suggest the Dark Tetrad traits would be elevated among members of GLOs. That said, there is also evidence to suggest the Dark Tetrad traits *would not* be elevated among members of GLOs. First, most studies examining the personality correlates of membership in GLOs have only found small and often non-significant associations between agreeableness (e.g., tender-mindedness, honesty, modesty) and membership in these organizations (Armstrong & Grieve, 2015; Cole et al., 2003a, 2003b). Low agreeableness—or, at least, some closely-related trait—appears to unite the four Dark Tetrad traits (Book et al., 2016; Vize et al., 2019). This doesn't necessarily mean that the Dark Tetrad traits *could not* be associated with membership in GLOs. It simply suggests that, if they are associated with membership in GLOs, it would likely be due to the aspects of each trait that are not shared with the other traits (e.g., the agentic aspects of narcissism).

Second, individuals high in Machiavellianism, psychopathy, and sadism express less of a need for affiliation (Jonason & Ferrell, 2016; Jonason & Zeigler-Hill, 2018). Individuals high in these traits may, therefore, shy away from GLOs because they do not see the opportunity for social connection provided by these organizations as being particularly desirable. In contrast, individuals high in grandiose narcissism tend to express a greater desire for affiliation (Jonason & Ferrell, 2016;

Jonason & Zeigler-Hill, 2018), providing additional (albeit incidental) evidence that narcissistic individuals would be drawn to these organizations.

Finally, there is some evidence to suggest that psychopathy, specifically, would be less common among members of GLOs. Psychopathic individuals tend to be less conscientious (e.g., self-disciplined, dependable, cautious; Muris et al., 2017),<sup>2</sup> whereas members of GLOs tend to be more conscientious (Armstrong & Grieve, 2015; Cole et al., 2003b; but see also Cole et al., 2003b; Park et al., 2009). It could be the case that psychopathic individuals are viewed as too unreliable and reckless to be recruited into GLOs.

In sum, there is both evidence to suggest that each of the Dark Tetrad traits *would* be associated with membership in GLOs and evidence to suggest that each of the Dark Tetrad traits *would not* be associated with membership in GLOs. As such, the present study takes an exploratory approach to the examination of the association between the Dark Tetrad traits and membership in these organizations. We do, however, feel comfortable making one prediction. Given that narcissism is associated with a greater desire for status (Back et al., 2013; Jones & Paulhus, 2011) and affiliation (Jonason & Ferrell, 2016; Jonason & Zeigler-Hill, 2018), as well as being the Dark Tetrad trait that is least associated with agreeableness (Muris et al., 2017), we suspect that narcissism would be elevated among members of sororities and fraternities. The present study aims, in part, to test this possibility.

## 2. Method

### 2.1. Participants

The data for the present study was drawn from five separate surveys administered between April 2019 and April 2021<sup>3</sup> at the University of Oregon. In total, 2941 undergraduate students completed the surveys. Participants who selected the same response to all items relevant to the present study were excluded ( $n = 37$ ), as were participants who did not provide a response to the question about membership in a GLO ( $n = 692$ ). To achieve gender-specific groups that were large enough to compare, participants identifying as neither a woman nor a man were also removed ( $n = 21$ ). In the end, the sample included 2191 participants ( $M$  age = 19.53;  $SD$  age = 2.12; 68.14% women). Most participants identified as being non-Hispanic White (65.59%), with the next largest groups being Asian (12.00%), Hispanic or Latinx (9.22%), and mixed race (6.02%). With the present sample, a correlation as small as 0.06 could be detected with 80.00% power.

### 2.2. Materials and procedure

Participants completed the *Short Dark Tetrad* (Paulhus et al., 2020), a 28-item measure of Machiavellianism (e.g., “I love it when a tricky plan succeeds”), grandiose narcissism (e.g., “I like to show off every now and then”), psychopathy (e.g., “People who mess with me always regret it”), and everyday sadism (e.g., “I know how to hurt someone with words alone”). The participants responded to all items using a five-point Likert scale (1 = “Strongly disagree”; 5 = “Strongly agree”). Cronbach's alphas, average inter-item correlations, descriptive statistics, gender comparisons, and zero-order correlations among the Dark Tetrad traits are provided in Table 1.

Participants were also asked, “Are you a new or fully-initiated member of a Greek Letter Organization (i.e., fraternity or sorority) at the University of Oregon?” Overall, 79.05% of the sample indicated that

<sup>2</sup> This association is especially pronounced when psychopathy is assessed using the Short Dark Tetrad (Paulhus et al., 2020; see Blötnner et al., 2021), as is the case in the present study.

<sup>3</sup> Excluding data collected since the start of the COVID-19 pandemic did not meaningfully change any of the results presented here.

**Table 1**

Descriptive statistics, reliabilities, gender comparisons, and zero-order correlations for the Dark Tetrad traits.

	$\alpha$	$\bar{r}_{ij}$	Mean (SD)			t	g	1.	2.	3.
			Overall	Women	Men					
1. Machiavellianism	0.69	0.24	3.16 (0.63)	3.07 (0.65)	3.34 (0.54)	-9.96*	-0.46	-	-	-
2. Narcissism	0.73	0.28	2.93 (0.65)	2.85 (0.66)	3.09 (0.60)	-8.26*	-0.38	<b>0.37*</b>	-	-
3. Psychopathy	0.72	0.27	2.08 (0.64)	1.96 (0.59)	2.34 (0.66)	-12.72*	<b>-0.59</b>	<b>0.33*</b>	<b>0.39*</b>	-
4. Sadism	0.76	0.30	2.40 (0.78)	2.14 (0.65)	2.97 (0.71)	-25.91*	<b>-1.20</b>	<b>0.48*</b>	<b>0.35*</b>	<b>0.54*</b>

Note.  $\alpha$  is Cronbach's  $\alpha$ .  $\bar{r}_{ij}$  is the average correlation among the scale's items. g is Hedges' g. Hedges' g's greater than 0.50 are bolded. Zero-order correlations greater than 0.30 are bolded.

\*  $p < .001$ .

they were not a member of a GLO and 20.95% of the sample indicated that they were a member of a GLO. A  $2 \times 2$  chi-square test indicated that there was a greater proportion of women in sororities (22.77%) than there were men in fraternities (17.05%), but the effect was quite small,  $\chi^2(1, N = 2191) = 9.41, p = .002, \phi = 0.07$ .

### 3. Results

A logistic regression model was used to predict membership in a GLO from a persons' levels of the Dark Tetrad traits.<sup>4</sup> The results of the model (Table 2) indicated that participants with greater levels of narcissism were more likely to be members of GLOs,  $b = 0.75$ , 95% CI [0.56, 0.95],  $SE = 0.10$ , Wald = 7.58,  $p < .001$ . Specifically, for every one-unit increase in grandiose narcissism, the odds of a participant being in a GLO increased by 2.13 times. In contrast, participants with greater levels of Machiavellianism ( $b = -0.34$ , 95% CI [-0.54, -0.14],  $SE = 0.10$ , Wald = -3.32,  $p < .001$ ) and sadism ( $b = -0.23$ , 95% CI [-0.42, -0.05],  $SE = 0.09$ , Wald = -2.54,  $p = .011$ ) were less likely to be members of GLOs. For every one-unit increase in Machiavellianism and sadism, the odds of a participant being in a GLO decreased by 0.71 times and 0.79 times, respectively. Psychopathy was not significantly associated with membership in a GLO,  $b = -0.05$ , 95% CI [-0.26, 0.16],  $SE = 0.11$ , Wald = -0.43,  $p = .665$ .

### 4. Discussion

Previous research has examined the association between various general personality traits and membership in GLOs (e.g., Armstrong & Grieve, 2015). The present study extends our knowledge of the personality correlates of membership in such organizations by examining the association of four antagonistic personality traits—Machiavellianism, grandiose narcissism, psychopathy, and everyday sadism—with

**Table 2**

Predicting membership in GLOs from the Dark Tetrad traits.

	Logit	95% CI	Odds ratio	95% CI
Intercept	-1.86**	[-2.50, -1.24]	0.16	[0.08, 0.29]
Machiavellianism	-0.34**	[-0.54, -0.14]	0.71	[0.58, 0.87]
Narcissism	0.75**	[0.56, 0.95]	2.13	[1.75, 2.59]
Psychopathy	-0.05	[-0.26, 0.16]	0.96	[0.77, 1.18]
Sadism	-0.23*	[-0.42, -0.05]	0.79	[0.66, 0.95]

Note.

\*  $p < .05$ .

\*\*  $p < .001$ .

<sup>4</sup> We also specified a second model that included gender as a predictor, but there was substantial evidence against the adoption of this model ( $\Delta BIC = 3.11$ ). There was, likewise, substantial evidence against the adoption of a model that included the interaction between gender and the Dark Tetrad traits ( $\Delta BIC = 19.08$ ).

membership in sororities and fraternities. The results indicate that individuals high in grandiose narcissism are more likely to be members of GLOs, whereas those high in Machiavellianism and sadism are less likely to be members of GLOs. Psychopathy was not associated with membership in either sororities or fraternities.

The finding for grandiose narcissism may not come as much of a surprise. Grandiose narcissism is associated with both a need to reinforce a grandiose sense of self (Back et al., 2013; Jones & Paulhus, 2011) and a need for affiliation (Jonason & Ferrell, 2016; Jonason & Zeigler-Hill, 2018). Narcissistic individuals may, therefore, gravitate to GLOs because they see these organizations as a way to acquire status and expand their social networks. The present finding also aligns with previous work on general personality traits. Of the Five-Factor Model traits, extraversion demonstrates the greatest associations with membership in GLOs (Armstrong & Grieve, 2015; Cole et al., 2003a, 2003b; Park et al., 2009), and narcissism is defined, in part, by agentic extraversion (Miller et al., 2016).

The elevated levels of narcissism among GLO members may provide some benefits to these organizations. Narcissistic individuals tend to be more charismatic (Deluga, 1997), innovative (Kashmiri et al., 2017), influential (Goncalo et al., 2010), and, at least at zero-acquaintance, likeable (Back et al., 2010) than their non-narcissistic counterparts (see Campbell et al., 2011, or Fatfouta, 2019, for a review). These characteristics may prove beneficial when trying to establish new sorority or fraternity chapters, as well as when trying to recruit new members to existing chapters. That said, having narcissistic individuals in one's organization also carries numerous risks. For example, narcissistic individuals are more likely to exploit and abuse other members of their organizations (O'Boyle et al., 2012), defraud their organizations (Blickle et al., 2006), and make risky policy decisions (Buyl et al., 2019), all of which could be disastrous for organizations that are often already in a precarious position with their home institutions. The present study takes an important first step in establishing an association between narcissism and membership in GLOs, but additional work will be required to understand the consequences that this has for these organizations.

The negative association between Machiavellianism and membership in GLOs also does not come as much of a surprise given the existing literature. Machiavellianism is negatively associated with both a need for affiliation (Jonason & Ferrell, 2016; Jonason & Zeigler-Hill, 2018) and—at least after accounting for narcissism and psychopathy—extraversion (Muris et al., 2017). It could be the case that Machiavellian individuals are too cold, aloof, and socially withdrawn to either want to join a GLO or be recruited into a GLO. Alternatively, Machiavellian individuals—given their penchant for manipulation (Rauthmann & Will, 2011)—may be seen as too conniving and duplicitous to be invited into these organizations. This could be because these behaviours make them unlikeable or because these behaviours are seen as a liability to the organization.

The negative association between sadism and membership in GLOs is a bit harder to make sense of, especially given the association between sadism and hazing (Arteta-Garcia, 2015). That said, those high in everyday sadism may feel less of a desire to join these organizations

because they feel less of a need to affiliate with others (Jonason & Zeigler-Hill, 2018). Similarly, the psychological and physical cruelty typical of these individuals may make them unattractive as potential members of these organizations. There is, in fact, some evidence to suggest that sadistic individuals are viewed as less likeable than their non-sadistic counterparts (Rogers et al., 2018).

#### 4.1. Limitations and future directions

The present study is not without its limitations. First, many of the effects identified here are quite small (Chen et al., 2010). We would encourage researchers to examine whether there are potentially more important determinants when it comes to membership in these organizations. Second, the present study was cross-sectional (i.e., measurement only occurred at one time), making it impossible to determine whether participants in sororities and fraternities are more narcissistic to begin with or whether they became more narcissistic after joining their respective organizations. Future longitudinal research could be undertaken to examine such possibilities. Third, narcissistic individuals have been known to engage in impression management (Kowalski et al., 2018). It is possible that a narcissistic individual who did not receive an invitation to join a sorority or fraternity may, nevertheless, report that they are part of a sorority or fraternity to give the impression that they are more popular or more desirable than they actually are. Future efforts should make use of other sources of data—such as sorority and fraternity membership records—to avoid this possibility. Fourth, the present study used only a single measure of the Dark Tetrad traits (i.e., the Short Dark Tetrad; Paulhus et al., 2020). It is yet unclear whether the relations identified in the present study would hold for other conceptualizations of the Dark Tetrad traits. For example, it seems plausible that measures of psychopathy that include less content related to irresponsibility and recklessness and more content related to fearlessness and social potency (e.g., the *Psychopathic Personality Inventory-Revised*; Lilienfeld & Widows, 2005) would show positive associations with membership in GLOs. Finally, the Dark Tetrad traits were assessed as unidimensional constructs in the present study. It is, therefore, impossible to examine whether the effect of the Dark Tetrad traits on membership in GLOs varies depending on the exact aspect of the Dark Tetrad trait involved (e.g., narcissistic leadership/authority versus narcissistic entitlement/exploitativeness). Future research could use multidimensional measures of the Dark Tetrad traits to provide insight into these relations.

## 5. Conclusion

The present study examined the association between the Dark Tetrad traits and membership in GLOs among 2191 undergraduate students at the University of Oregon. While those scoring high in narcissism were more likely to be members of sororities and fraternities, those scoring high in Machiavellianism and sadism were less likely to be members of sororities and fraternities. Future work will be required to examine why these differences exist, but the current study takes an important first step in identifying the antagonistic personality traits common to members of GLOs.

### Declaration of competing interest

None.

## References

- Armstrong, M., & Grieve, F. (2015). Big five personality traits of collegiate social fraternities and sororities. *Oracle: The Research Journal of the Association of Fraternity/Sorority Advisors*, 10(2), 68.
- Arteta-Garcia, J. (2015). *The mediating role of social dominance orientation between Dark Tetrad personalities and hazing behaviors in college students*. Texas State University (Unpublished Master's thesis).
- Back, M. D., Küfner, A. C. P., Dufner, M., Gerlach, T. M., Rauthmann, J. F., & Denissen, J. J. A. (2013). Narcissistic admiration and rivalry: Disentangling the bright and dark sides of narcissism. *Journal of Personality and Social Psychology*, 105(6), 1013–1037.
- Back, M. D., Schmukle, S. C., & Egloff, B. (2010). Why are narcissists so charming at first sight? Decoding the narcissism-popularity link at zero acquaintance. *Journal of Personality and Social Psychology*, 98(1), 132–145.
- Baka, L. (2019). Explaining active and passive types of counterproductive work behavior: The moderation effect of bullying, the dark triad and job control. *International Journal of Occupational Medicine and Environmental Health*, 32(6), 777–795.
- Ball, L., Tully, R., & Egan, V. (2018). The influence of impulsivity and the dark triad on self-reported aggressive driving behaviours. *Accident Analysis and Prevention*, 120, 130–138.
- Baughman, H. M., Jonason, P. K., Veselka, L., & Vernon, P. A. (2014). Four shades of sexual fantasies linked to the dark triad. *Personality and Individual Differences*, 67, 47–51.
- Blickle, G., Schlegel, A., Fassbender, P., & Klein, U. (2006). Some personality correlates of business white-collar crime. *Applied Psychology*, 55(2), 220–233.
- Blötner, C., Ziegler, M., Wehner, C., Back, M. D., & Grosz, M. P. (2021). The nomological network of the short dark tetrad scale (SD4). *European Journal of Psychological Assessment*, 1–11.
- Book, A., Visser, B. A., Blais, J., Hosker-Field, A. M., Methot-Jones, T., Gauthier, N. Y., Volk, A., Holden, R. R., & D'Agata, M. T. (2016). Unpacking more "evil": What is at the core of the dark tetrad? *Personality and Individual Differences*, 90, 269–272.
- Buckels, E. E., Jones, D. N., & Paulhus, D. L. (2013). Behavioral confirmation of everyday sadism. *Psychological Science*, 24(11), 2201–2209.
- Buyl, T., Boone, C., & Wade, J. B. (2019). CEO narcissism, risk-taking, and resilience: An empirical analysis in U.S. Commercial banks. *Journal of Management*, 45(4), 1372–1400.
- Campbell, W. K., Hoffman, B. J., Campbell, S. M., & Marchisio, G. (2011). Narcissism in organizational contexts. *Human Resource Management Review*, 21(4), 268–284.
- Chabrol, H., Bouvet, R., & Goutaudier, N. (2017). The dark tetrad and antisocial behavior in a community sample of college students. *Journal of Forensic Psychology Research and Practice*, 17(5), 295–304.
- Chabrol, H., Van Leeuwen, N., Rodgers, R., & Séjourné, N. (2009). Contributions of psychopathic, narcissistic, machiavellian, and sadistic personality traits to juvenile delinquency. *Personality and Individual Differences*, 47(7), 734–739.
- Chen, H., Cohen, P., & Chen, S. (2010). How big is a big odds ratio? Interpreting the magnitudes of odds ratios in epidemiological studies. *Communications in Statistics: Simulation and Computation*, 39(4), 860–864.
- Cole, M. S., Feild, H. S., & Giles, W. F. (2003a). Using recruiter assessments of applicants' resume content to predict applicant mental ability and big five personality dimensions. *International Journal of Selection and Assessment*, 11(1), 78–88.
- Cole, M. S., Feild, H. S., & Giles, W. F. (2003). What can we uncover about applicants based on their resumes? A field study. *Applied HRM Research*, 8(2), 51–62.
- Costa, P. T., & McCrae, R. R. (1992). *Professional manual: Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI)*. Odessa, FL: Psychological Assessment Resources.
- Crysel, L. C., Crosier, B. S., & Webster, G. D. (2013). The dark triad and risk behavior. *Personality and Individual Differences*, 54(1), 35–40.
- Dåderman, A. M., & Ragnestål-Impola, C. (2019). Workplace bullies, not their victims, score high on the dark triad and extraversion, and low on agreeableness and honesty-humility. *Heliyon*, 5.
- Deluga, R. J. (1997). Relationship among american presidential charismatic leadership, narcissism, and rated performance. *Leadership Quarterly*, 8(1), 49–65.
- Dinić, B., Velimirović, M., & Sadiković, S. (2019). Dark traits from the variable-centered and person-centered approach and their relations with some risky behaviours. *Psiholoska Istrazivanja*, 22(1), 17–32.
- Endriulaitienė, A., Šeibokaitė, L., Žardeckaitė-Matulaitienė, K., Marksaitytė, R., & Slavinskienė, J. (2018). Attitudes towards risky driving and dark triad personality traits in a group of learner drivers. *Transportation Research Part F: Traffic Psychology and Behaviour*, 56, 362–370.
- Fatfouta, R. (2019). Facets of narcissism and leadership: A tale of Dr. Jekyll and Mr. Hyde? *Human Resource Management Review*, 29(4), Article 100669.
- Glenn, A. L., & Sellbom, M. (2015). Theoretical and empirical concerns regarding the dark triad as a construct. *Journal of Personality Disorders*, 29(3), 360–377.
- Goncalo, J. A., Flynn, F. J., & Kim, S. H. (2010). Are two narcissists better than one? The link between narcissism, perceived creativity, and creative performance. *Personality and Social Psychology Bulletin*, 36(11), 1484–1495.
- Greitemeyer, T., & Sagioglou, C. (2017). The longitudinal relationship between everyday sadism and the amount of violent video game play. *Personality and Individual Differences*, 104, 238–242.
- Jonason, P. K., & Ferrell, J. D. (2016). Looking under the hood: The psychogenic motivational foundations of the dark triad. *Personality and Individual Differences*, 94, 324–331.
- Jonason, P. K., Luevano, V. X., & Adams, H. M. (2012). How the dark triad traits predict relationship choices. *Personality and Individual Differences*, 53(3), 180–184.
- Jonason, P. K., Slomski, S., & Partyka, J. (2012). The dark triad at work: How toxic employees get their way. *Personality and Individual Differences*, 52(3), 449–453.
- Jonason, P. K., & Zeigler-Hill, V. (2018). The fundamental social motives that characterize dark personality traits. *Personality and Individual Differences*, 132, 98–107.
- Jones, D. N., & Paulhus, D. L. (2011). Differentiating the Dark Triad within the interpersonal circumplex. In *Handbook of interpersonal psychology: Theory, research, assessment, and therapeutic interventions* (pp. 249–267).

- Kashmiri, S., Nicol, C. D., & Arora, S. (2017). Me, myself, and I: Influence of CEO narcissism on firms' innovation strategy and the likelihood of product-harm crises. *Journal of the Academy of Marketing Science*, 45(5), 633–656.
- Kay, C. S. (2021). Negative traits, positive assortment: Revisiting the dark triad and a preference for similar others. *Journal of Social and Personal Relationships*, 38(4), 1259–1278.
- Kowalski, C. M., Rogoza, R., Vernon, P. A., & Schermer, J. A. (2018). The dark triad and the self-presentation variables of socially desirable responding and self-monitoring. *Personality and Individual Differences*, 120, 234–237.
- Lee, K., Ashton, M. C., Wiltshire, J., Bourdage, J. S., Visser, B. A., & Gallucci, A. (2013). Sex, power, and money: Prediction from the dark triad and honesty-humility. *European Journal of Personality*, 27, 169–184.
- Lilienfeld, S. O., & Widows, M. R. (2005). *Psychopathic Personality Inventory - Revised (PPI-R): Professional manual*. Lutz, Florida: PAR.
- Miller, J. D., Lynam, D. R., McCain, J. L., Few, L. R., Crego, C., Widiger, T. A., & Campbell, W. K. (2016). Thinking structurally about narcissism: An examination of the five-factor narcissism inventory and its components. *Journal of Personality Disorders*, 30(1), 1–18.
- Muris, P., Merckelbach, H., Otgaar, H., & Meijer, E. (2017). The malevolent side of human nature: A meta-analysis and critical review of the literature on the dark triad (narcissism, machiavellianism, and psychopathy). *Perspectives on Psychological Science*, 12(2), 183–204.
- O'Boyle, E. H., Forsyth, D. R., Banks, G. C., & McDaniel, M. A. (2012). A meta-analysis of the dark triad and work behavior: A social exchange perspective. *Journal of Applied Psychology*, 97(3), 557–579.
- Onyedire, N. G., Chukwuorji, J. B. C., Orjiakor, T. C., Onu, D. U., Aneke, C. I., & Ifeagwazi, C. M. (2019). Associations of dark triad traits and problem gambling: Moderating role of age among university students. *Current Psychology*, 1–12.
- Park, A., Sher, K. J., Wood, P. K., & Krull, J. L. (2009). Dual mechanisms underlying accentuation of risky drinking via fraternity/sorority affiliation: The role of personality, peer norms, and alcohol availability. *Journal of Abnormal Psychology*, 118(2), 241–255.
- Paulhus, D. L., Buckels, E. E., Trapnell, P. D., & Jones, D. N. (2020). Screening for dark personalities: The short dark tetrad (SD4). *European Journal of Psychological Assessment*, 37(3), 208–222.
- Paulhus, D. L., & Williams, K. M. (2002). The dark triad of personality: Narcissism, machiavellianism, and psychopathy. *Journal of Research in Personality*, 36(6), 556–563.
- Rauthmann, J. F., & Will, T. (2011). Proposing a multidimensional machiavellianism conceptualization. *Social Behavior and Personality: An International Journal*, 39(3), 391–403.
- Rogers, K. H., Le, M. T., Buckels, E. E., Kim, M., & Biesanz, J. C. (2018). Dispositional malevolence and impression formation: Dark tetrad associations with accuracy and positivity in first impressions. *Journal of Personality*, 86(6), 1050–1064.
- Stenason, L., & Vernon, P. A. (2016). The dark triad, reinforcement sensitivity and substance use. *Personality and Individual Differences*, 94, 59–63.
- Tollini, C., & Wilson, B. (2010). Fraternity members' views of negative stereotypes. *Oracle: The Research Journal of the Association of Fraternity/Sorority Advisors*, 5(1), 34–44.
- Trombly, D. R. C., & Zeigler-Hill, V. (2017). The dark triad and disordered gambling. *Current Psychology*, 36, 740–746.
- Vize, C. E., Collison, K. L., Miller, J. D., & Lynam, D. R. (2019). The “core” of the dark triad: A test of competing hypotheses. *Personality Disorders: Theory, Research, and Treatment*, 11(2), 91–99.
- Williams, K. M., McAndrew, A., Learn, T., Harm, P., & Paulhus, D. L. (2001). The Dark Triad Returns: Entertainment preferences and antisocial behavior among narcissists, Machiavellians, and psychopaths. In *Poster Presented at the 109th Annual Meeting of the American Psychological Association*.
- Wilson, B., & Tollini, C. (2013). Sorority members' views of negative stereotypes. *Oracle: The Research Journal of the Association of Fraternity/Sorority Advisors*, 8(1), 35–47.